DOCKET NO: 279167US2PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
ATSUSHI YAMAGISHI	: EXAMINER: EIDE, HEIDI MARIE
SERIAL NO: 10/551,842	:
FILED: NOVEMBER 15, 2006	: GROUP ART UNIT: 3732
FOR: CARIOUS TOOTH DETECTION DEVICE	:

APPEAL BRIEF WITH APPENDICES

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal from a final Office Action dated May 25, 2010. A Notice of Appeal was timely filed with a request for a one-month extension of time on September 24, 2010.

I. REAL PARTY IN INTEREST

The real party in interest in the present application is the assignee of the present application, Kao Corporation, having a place of business at 14-10, Nihonbashi Kayaba-Cho 1-chome, Chuo-Ku, Tokyo Japan 103-8210.

II. RELATED APPEALS AND INTERFERENCES

Appellant, Appellant's legal representative, and the assignee are not aware of any other interferences or judicial proceedings that may be related to, directly effect or be directly effected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF THE CLAIMS

Claims 2-8, 14-23, 25, 28, and 29 are pending in this application. Each of claims 2-8, 14-23, 25, 28, and 29 is being appealed.

Each of Claims 1, 9-13, 24, 26, and 27 were previously canceled.

IV. STATUS OF THE AMENDMENTS

A Request for Reconsideration was filed on August 25, 2010, subsequent to the Final rejection of May 25, 2010. No claims were amended by the Request for Reconsideration. Further, the Advisory Action of September 8, 2010 indicated that the Request for Reconsideration was entered.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The claims are directed to an apparatus and methods that detects dental caries, also known as tooth decay or a cavity, based on fluorescence from a measuring area of a tooth. Specifically, the dental caries are detected by irradiating ultraviolet light of at least two different intensities onto a single measuring area of the tooth and measuring the fluorescence received from the measuring area of the tooth.

Provided below are explanations as to how the subject matter in each of the claims subsequently argued as distinguishing over the applied art have support in the specification. The indications in the specification are examples within the specification supporting the claimed subject matter and are not intended to be exhaustive.

Claim 2

Claim 2 recites a dental caries detecting device (1, Fig. 2), comprising:

an ultraviolet light source (2, Fig. 2; page 7, lines 5-11) that irradiates ultraviolet light of at least two different intensities, including ultraviolet light of first intensity (U_1, Fig. 6) and ultraviolet light of second intensity (U_2, Fig. 6), onto a single measuring area of a tooth (page 14, lines 4-6);

a fluorescence receiving portion (3, Fig. 2) that receives fluorescence from the single measuring area of the tooth in response to the ultraviolet irradiation of the at least two different light intensities from the ultraviolet light source (S31 and S32, Fig. 6; page 14, lines 6-9);

a fluorescence data analysis portion (4, Fig. 2) that analyzes fluorescence data transmitted from the fluorescence receiving portion (page 6, lines 23-24 and 27-29; page 8, lines 26-29); and

a data display portion (5, Fig. 2) that displays data analyzed by the fluorescence data analysis portion (page 6, lines 24-26), wherein

the fluorescence receiving portion receives first fluorescence by the ultraviolet light of first intensity and transmits first fluorescence data to the fluorescence data analysis portion (S31, Fig. 6; page 14, lines 6-16),

the fluorescence receiving portion receives second fluorescence by the ultraviolet light of second intensity and transmits second fluorescence data to the fluorescence data analysis portion (S32, Fig. 6; page 14, lines 6-16), and

said fluorescence data analysis portion analyzes the first fluorescence data and the second fluorescence data in at least one wavelength band (S33, S34, S35, Fig. 6; page 14, lines 17-27).

Claim 14

Claim 14 recites a dental caries detecting method (page 9, lines 26-30; page 14, lines 2-3), comprising:

irradiating a single measuring area of a tooth with ultraviolet light of at least two different intensities from a light source (S1-S3, Fig. 3; page 14, lines 4-6);

obtaining fluorescence from said single measuring area for the at least two different light intensities of the ultraviolet light from the light source among light intensities U_1, U_2, ..., and U_n where $U_1 > U_2 ... > U_n$ as first, second, ..., and n-th information, respectively (page 14, lines 6-9; page 18, lines 6-11);

obtaining first fluorescence intensities R_1, B_1, and G_1, second fluorescence intensities R_2, B_2, and G_2, ..., and n-th fluorescence intensities R_n, B_n, and G_n of said fluorescence in at least two wavelength bands (page 14, lines 10-16) selected from a first wavelength band selected from a wavelength band from 550 nm to 810 nm and having a wavelength from 10 nm to 260 nm (page 4, lines 14-17 and 25-26), a second wavelength band selected from a wavelength band from 380 nm to 550 nm and having a wavelength width from 10 nm to 170 nm (page 4, lines 17-20 and 26-28), and a third wavelength band selected from a wavelength band from 450 nm to 650 nm and having a wavelength width from 10 nm to 200 nm (page 4, lines 20-24 and 28-30) based on said first information, the second information,..., and the n-th information;

carrying out calculation according to the following formula (5) (S61, Fig. 9; page 16, lines 17-20):

$$(R_1 - R_2) + (R_2 - R_3) + ... + (R_{n-1} - R_n) \qquad \text{...formula (5)}$$

and

determining that there is a possibility of dental caries if a sign of a result obtained from formula (5) is positive, and determining that the tooth is healthy if the sign is negative

or a result is zero (S62, S63, S64, S65, S67, Fig. 9; page 15, lines 25-29; page 16, lines 21-23).

Claim 23

Claim 23 recites a dental caries detecting method that detects dental caries based on fluorescence from a measuring area of a tooth (page 9, lines 26-30; page 14, lines 2-3), comprising:

irradiating the measuring area with ultraviolet light of at least two different light intensities from a light source (S1-S3, Fig. 3; page 14, lines 4-6);

obtaining fluorescence from said measuring area as first information, second information , ..., and n-th information for at least two different light intensities of the ultraviolet light from the light source U_1, U_2, ..., and U_n where $U_1 > U_2 ... > U_n$ (page 14, lines 6-9; page 18, lines 6-11);

obtaining a first fluorescence intensity R_1, a second fluorescence intensity R_2, ..., and an n-th fluorescence intensity R_n in a first wavelength band selected from a wavelength band from 550 nm to 810 nm and having a wavelength width from 10 nm to 260 nm (page 4, lines 14-17 and 25-26) based on said first information, the second information,..., and the n-th information;

calculating according to the following formula (5) (S61, Fig. 9; page 16, lines 17-20):

$(R_1 - R_2) + (R_2 - R_3) + ... + (R_{n-1} - R_n)$ ...formula (5)

and

determining that there is a possibility of dental caries if a sign of a result obtained from formula (5) is positive, and determining that the tooth is healthy if the sign is negative or the result is zero (S62, S63, S64, S65, S67, Fig. 9; page 15, lines 25-29; page 16, lines 21-23).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 2-8, 14-23, 25, and 28-29 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent application publication 2003/0156788 to Henning (herein "Henning") in view of U.S. patent 5,382,163 to Putnam (herein "Putnam").

The above-noted grounds for rejection is being appealed.

VII. ARGUMENT

Claims 2-8 and 25 Distinguish Over Henning in View of Putnam

It is respectfully submitted that the rejection of Claims 2-8 and 25 is in error as no combination of teachings of Henning in view of Putnam discloses or suggests a dental caries detecting device that comprises an ultraviolet light source that irradiates ultraviolet light of at least two different intensities onto a single measuring area of a tooth. Thus, the references also do not disclose or suggest a fluorescence data analysis portion that analyzes fluorescence data from the single measuring area of the tooth in response to the ultraviolet irradiation of the at least two different light intensities from the ultraviolet light source. Accordingly, these features distinguish Claim 2, and Claims 3-8 and 25 which depend on Claim 2, over the applied art.

Specifically, independent Claim 2 recites a dental caries detecting device that measures a same area of a tooth with ultraviolet light having different light intensities. Thus, even though the light radiated from the light source changes intensity, it is still within the ultraviolet light wavelength range. The fluorescence data analyzed by the fluorescence data analysis portion changes in response to the change in the irradiation intensity because the fluorescence intensity changes according to the intensity of the ultraviolet beam.[1] Thus, the

[1] See the original specification, for example, at page 14, line 28 to page 15, line 3.

dental caries detecting device can measure the same area of a tooth with ultraviolet light having different light intensities and compare the fluorescence data to determine if a tooth is healthy or possibly has dental caries.[2] Further, the dental caries detecting device can measure the degree of progress of dental caries by irradiating a single measuring area with ultraviolet light having different light intensities.[3]

Henning describes a method and apparatus for detecting the presence of caries in a tooth by irradiating the tooth using light in different wavelength ranges.[4] Specifically, as explained in paragraph [0010] of Henning, "the invention is based on the discovery" that the reflection from cementum (healthy) and the reflection from a calculus layer (unhealthy) are different *for different wavelength ranges*. Henning describes in paragraph [0026] that the intensity is varied between the *two wavelength ranges* (ultraviolet and infrared) used to measure the tooth so that "the signal reflected from healthy cementum is approximately the same in both wavelength ranges."

The apparatus described in Henning merely detects whether the tooth is healthy or carious by irradiating both a healthy area and a dental caries area of a tooth with light having different wavelengths. Accordingly, not only does the apparatus described in Henning have to measure more than a single area (i.e. a healthy area and a caries area) to detect dental caries, but the apparatus also cannot measure the degree of progress of dental caries.

Thus, Henning does not disclose or suggest measuring the fluorescence generated from a single area of a tooth irradiated with light having different intensities within the same wavelength range. Accordingly, the Office Action, in section 2 on page 3, acknowledges that Henning does not specifically teach that the irradiated light of different intensities are both in the ultraviolet range.

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[2] See the original specification, for example, at page 14, lines 17-23 and in Figure 6.
[3] See the original specification, for example, at page 15, line 9 to page 16, line 23 and in Figures 7-9.
[4] See Henning, at paragraph [0026].

Instead, the Office Action takes the position that "it would have been obvious to one having ordinary skill in the art at the time of the invention to select the intensities of the irradiation in any known range in order to detect preferred defects on the tooth." However, as discussed above, the method described in Henning is entirely based on the idea that healthy and non-healthy teeth reflect light *from different wavelength ranges* differently. Thus, Henning does not disclose or suggest how to determine if a tooth is healthy when the light intensity is within the same wavelength range.

Accordingly, modifying Henning to compare the reflection of irradiated light from the same wavelength would change the principle of operation upon which Henning is based. See M.P.E.P. § 2143.01(VI). Therefore, it respectfully submitted that a *prima facie* case of obviousness has not been established.

Further, it is noted that Henning only describes changing the light intensity of the irradiated light *between different wavelength ranges*. Specifically, Henning states in paragraph [0026] that "the radiation intensity in the near UV spectral range is approximately twice as high as that in the NIR spectral range." Thus, in Henning, all of the light that is irradiated at an ultraviolet wavelength is *at the same intensity*. Accordingly, if the modification to make all of the irradiated light of Henning ultraviolet is deemed to be proper, then Henning does not disclose or suggest that the light in the ultraviolet range would have different intensities. Further, as discussed above, Henning also does not disclose or suggest that the light in the ultraviolet range would have different intensities.

The Advisory Action states:

> The prior art teaches different tooth defects being detected at different wavelengths and selecting the wavelengths so that the magnitude of the reflected signal is the same in both wavelengths used to irradiate the tooth. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to select the wavelengths, both in the uv

> range, in order to detect a desired defect known to be detected within the uv range.

However, Henning actually teaches that the selected wavelengths are in different *ranges* (UV and NIR), not just different wavelengths. Additionally, as Henning describes the light within a single wavelength range as having the same intensity and relies upon the discovery that the health of the tooth is determined based on the reflection being different for different wavelength *ranges*, a person of ordinary skill in the art would not find it obvious to select different intensities of light within the same wavelength range.

Putman is relied on by the Office Action to show displaying data analyzed by a data analysis portion. It is respectfully submitted that Putman does not disclose or suggest measuring an area of a tooth with ultraviolet light of at least two different intensities. Therefore, Putman does not cure these deficiencies of Henning.

Accordingly, a proper combination of the cited references does not disclose or suggest "an ultraviolet light source that irradiates ultraviolet light of at least two different intensities, including ultraviolet light of first intensity and ultraviolet light of second intensity, onto a single measuring area of a tooth" or that "said fluorescence data analysis portion analyzes the first fluorescence data and the second fluorescence data in at least one wavelength band." Thus, the rejection of Claim 2, and Claims 3-8 and 25 which depend on Claim 2, as unpatentable over Henning in view of Putman is in error and should be reversed.

Claims 14-22 and 28 Distinguish Over Henning in View of Putnam

It is respectfully submitted that the rejection of Claims 14-22 and 28 is in error as no combination of teachings of Henning in view of Putnam discloses or suggests a dental caries detecting method that comprises irradiating a single measuring area of a tooth with ultraviolet light of at least two different intensities from a light source. Thus, the references also do not

disclose or suggest, based on the intensity of the fluorescence received, determining that there is a possibility of dental caries if a sign of a result obtained from formula (5) is positive and the tooth is healthy if the sign is negative or a result is zero. Accordingly, these features distinguish Claim 14, and Claims 15-22 and 28 which depend on Claim 14, over the applied art.

In view of the above discussion of Henning and Putman, it is respectfully submitted that the cited combination does not disclose or suggest irradiating a single measuring area of a tooth with ultraviolet light of at least two different intensities from a light source. Further, the combination cannot be properly modified to compare the reflection of irradiated light from the same wavelength as this modification would change the principle of operation upon which Henning is based. Additionally, even if the modification were deemed proper, such a combination does not disclose or suggest using different light intensities within the same wavelength range.

Thus, the rejection of Claim 14, and Claims 15-22 and 28 which depend on Claim 14, as unpatentable over Henning in view of Putman is in error and should be reversed.

Claims 23 and 29 Distinguish Over Henning in View of Putnam

It is respectfully submitted that the rejection of Claims 23 and 29 is in error as no combination of teachings of Henning in view of Putnam discloses or suggests a dental caries detecting method that comprises irradiating the measuring area with ultraviolet light of at least two different light intensities from a light source. Thus, the references also do not disclose or suggest, based on the intensity of the fluorescence received, determining that there is a possibility of dental caries if a sign of a result obtained from formula (5) is positive and the tooth is healthy if the sign is negative or a result is zero. Accordingly, these features distinguish Claim 23, and Claim 29 which depends on Claim 23, over the applied art.

In view of the above discussion of Henning and Putman, it is respectfully submitted that the cited combination does not disclose or suggest irradiating a single measuring area of a tooth with ultraviolet light of at least two different intensities from a light source. Further, the combination cannot be properly modified to compare the reflection of irradiated light from the same wavelength as this modification would change the principle of operation upon which Henning is based. Additionally, even if the modification were deemed proper, such a combination does not disclose or suggest using different light intensities within the same wavelength range.

Thus, the rejection of Claim 23, and Claim 29 which depends on Claim 23, as unpatentable over Henning in view of Putman is in error and should be reversed.

VIII. CONCLUSION

For the above reasons, the above-noted rejections in the outstanding Office Action are improper and must be REVERSED.

Respectfully submitted,

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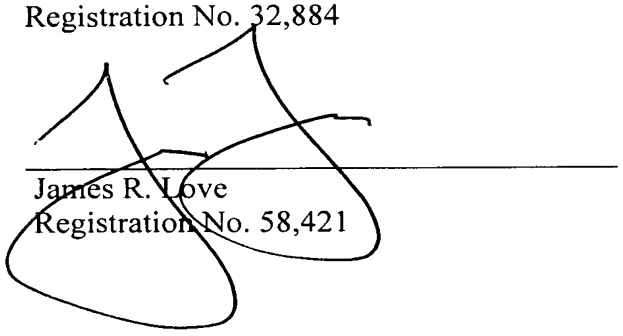

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I. CLAIMS APPENDIX

Claim 1 (Canceled).

Claim 2 (Appealed): A dental caries detecting device, comprising:

an ultraviolet light source that irradiates ultraviolet light of at least two different intensities, including ultraviolet light of first intensity and ultraviolet light of second intensity, onto a single measuring area of a tooth;

a fluorescence receiving portion that receives fluorescence from the single measuring area of the tooth in response to the ultraviolet irradiation of the at least two different light intensities from the ultraviolet light source;

a fluorescence data analysis portion that analyzes fluorescence data transmitted from the fluorescence receiving portion; and

a data display portion that displays data analyzed by the fluorescence data analysis portion, wherein

the fluorescence receiving portion receives first fluorescence by the ultraviolet light of first intensity and transmits first fluorescence data to the fluorescence data analysis portion,

the fluorescence receiving portion receives second fluorescence by the ultraviolet light of second intensity and transmits second fluorescence data to the fluorescence data analysis portion, and

said fluorescence data analysis portion analyzes the first fluorescence data and the second fluorescence data in at least one wavelength band.

Claim 3 (Appealed): The dental caries detecting device according to claim 2, wherein said fluorescence data analysis portion calculates a degree of progress of dental caries based

on said fluorescence intensity in a first wavelength band selected in a wavelength band from 550 nm to 810 nm and having a wavelength width from 0.1 nm to 260 nm, and said fluorescence intensity in a second wavelength band selected from a wavelength band from 380 nm to 550 nm and having a wavelength width from 0.1 nm to 170 nm.

Claim 4 (Appealed): The dental caries detecting device according to claim 2, wherein said fluorescence data analysis portion calculates a degree of progress of dental caries based on said fluorescence intensity in a first wavelength band selected from a wavelength band from 550 nm to 810 nm and having a wavelength width from 0.1 nm to 260 nm, and one or more of said fluorescence intensity in a second wavelength band selected from a wavelength band from 380 nm to 550 nm and having a wavelength width from 0.1 nm to 170 nm and said fluorescence intensity in a third wavelength band selected from a wavelength band from 450 nm to 650 nm and having a wavelength width from 0.1 nm to 200 nm.

Claim 5 (Appealed): The dental caries detecting device according to claim 4, wherein said fluorescence receiving portion comprises an optical device that can extract information related to said fluorescence intensity in said first wavelength band and said second and/or third wavelength band from said visible light range.

Claim 6 (Appealed): The dental caries detecting device according to claim 5, wherein said optical device is one of a spectroscopic luminance meter, a color CCD, a CMOS, or an optical sensor with a color filter for at least two colors.

Claim 7 (Appealed): The dental caries detecting device according to claim 6, wherein an output intensity of said ultraviolet light source is adjustable.

Claim 8 (Appealed): The dental caries detecting device according to claim 7, wherein said ultraviolet light source is an ultraviolet LED.

Claim 9-13 (Canceled).

Claim 14 (Appealed): A dental caries detecting method, comprising:

irradiating a single measuring area of a tooth with ultraviolet light of at least two different intensities from a light source;

obtaining fluorescence from said single measuring area for the at least two different light intensities of the ultraviolet light from the light source among light intensities U_1, U_2, ..., and U_n where $U_1 > U_2 ... > U_n$ as first, second, ..., and n-th information, respectively;

obtaining first fluorescence intensities R_1, B_1, and G_1, second fluorescence intensities R_2, B_2, and G_2, ..., and n-th fluorescence intensities R_n, B_n, and G_n of said fluorescence in at least two wavelength bands selected from a first wavelength band selected from a wavelength band from 550 nm to 810 nm and having a wavelength from 10 nm to 260 nm, a second wavelength band selected from a wavelength band from 380 nm to 550 nm and having a wavelength width from 10 nm to 170 nm, and a third wavelength band selected from a wavelength band from 450 nm to 650 nm and having a wavelength width from 10 nm to 200 nm based on said first information, the second information,..., and the n-th information;

carrying out calculation according to the following formula (5):

$$(R_1 - R_2) + (R_2 - R_3) + ... + (R_{n-1} - R_n) \qquad \text{...formula (5)}$$

and

determining that there is a possibility of dental caries if a sign of a result obtained from formula (5) is positive, and determining that the tooth is healthy if the sign is negative or a result is zero.

Claim 15 (Appealed): The dental caries detecting method according to claim 14, further including:

calculating a dental caries degree CD_3 according to the following formula (6) if it is determined that there is a possibility of dental caries,

$CD_3 = (R_{n-1}/R_n) \times (B_{n-1}/B_n)$ ...formula (6)

comparing a value of said dental caries degree CD_3 and an upper threshold F_3;

determining the tooth as being healthy if the value of said dental caries degree CD_3 is equal to or larger than said upper threshold F_3 and determining the presence of dental caries if the value of said dental caries degree CD_3 is smaller than said upper threshold F_3.

Claim 16 (Appealed): The dental caries detecting method according to claim 15, further including:

comparing the value of said dental caries degree CD_3 and a lower threshold E_3 if the presence of dental caries is determined; and

determining that the dental caries is minor if the value of said dental caries degree CD_3 is equal to or larger than said lower threshold E_3, and determining that the dental caries is severe if the value of said dental caries degree CD_3 is smaller than said lower threshold E_3.

Claim 17 (Appealed): The dental caries detecting method according to claim 14, further including:

calculating a dental caries degree CD_4 according to the following formula (7) if it is determined that there is a possibility of dental caries,

$CD_4 = (R_{n-1}/R_n) \times (G_{n-1}/G_n)$ ...formula (7)

comparing a value of said dental caries degree CD_4 and an upper threshold F_4; and

determining the tooth as being healthy if the value of said dental caries degree CD_4 is equal to or larger than said upper threshold F_4, and determining the presence of dental caries if the value of said dental caries degree CD_4 is smaller than said upper threshold F_4.

Claim 18 (Appealed): The dental caries detecting method according to claim 17, further including:

comparing the value of said dental caries degree CD_4 and a lower threshold E_4 if the presence of dental caries is determined; and

determining that the dental caries is minor if the value of said dental caries degree CD_4 is equal to or larger than said lower threshold E_4 and determining that the dental caries is severe if the value of said dental caries degree CD_4 is smaller than said lower threshold E_4.

Claim 19 (Appealed): The dental caries detecting method according to claim 14, further including:

calculating a dental caries degree CD_4 according to the following formula (8) if it is determined that there is a possibility of dental caries,

$CD_5 = (R_{n-1}/R_n) \times \{(G_{n-1}/G_n) + (B_{n-1}/B_n)\}$ ...formula (8)

comparing a value of said dental caries degree CD_5 and an upper threshold F_5; and

determining the tooth as being healthy if the value of said dental caries degree CD_5 is equal to or larger than said upper threshold F_5, and determining the presence of dental caries if the value of said dental caries degree CD_5 is smaller than said upper threshold F_5.

Claim 20 (Appealed): The dental caries detecting method according to claim 19, further including:

comparing the value of said dental caries CD_5 and a lower threshold E_5 if the presence of dental caries is determined; and

determining that the dental caries is minor if the value of said dental caries CD_5 is equal to or larger than the lower threshold E_5 and determining that the dental caries is severe if the value of said dental caries degree CD_5 is smaller than said lower threshold E_5.

Claim 21 (Appealed): The dental caries detecting method according to any one of claims 14 to 20, wherein said n is 2.

Claim 22 (Appealed): A dental caries detecting computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform the dental caries detecting method according to any one of claims 14 to 20.

Claim 23 (Appealed): A dental caries detecting method that detects dental caries based on fluorescence from a measuring area of a tooth, comprising:

irradiating the measuring area with ultraviolet light of at least two different light intensities from a light source;

obtaining fluorescence from said measuring area as first information, second information , ..., and n-th information for at least two different light intensities of the ultraviolet light from the light source U_1, U_2, ..., and U_n where $U_1 > U_2 ... > U_n$;

obtaining a first fluorescence intensity R_1, a second fluorescence intensity R_2, ..., and an n-th fluorescence intensity R_n in a first wavelength band selected from a wavelength band from 550 nm to 810 nm and having a wavelength width from 10 nm to 260 nm based on said first information, the second information,..., and the n-th information;

calculating according to the following formula (5):

$(R_1 - R_2) + (R_2 - R_3) + \ldots + (R_{n-1} - R_n)$ ...formula (5)

and

determining that there is a possibility of dental caries if a sign of a result obtained from formula (5) is positive, and determining that the tooth is healthy if the sign is negative or the result is zero.

Claim 24 (Canceled).

Claim 25 (Appealed): The dental caries detecting device according to claim 2, wherein the fluorescence receiving portion includes a UV cut filter configured to pass light of at least 400 nm.

Claims 26 and 27 (Canceled).

Claim 28 (Appealed): The dental caries detecting method according to claim 14, wherein the obtaining the fluorescence includes utilizing a UV cut filter to pass light of at least 400 nm.

Claim 29 (Appealed): The dental caries detecting method according to claim 23, wherein the obtaining the fluorescence includes utilizing a UV cut filter to pass light of at least 400 nm.

II. EVIDENCE APPENDIX

None.

III. RELATED PROCEEDINGS APPENDIX

None.